# Dr. Mikheil Rukhaia

**Nutsubidze Plateau 3-3-2-21,**
**0183 Tbilisi, Georgia**
**Mob: (+995 597) 975 160**
**E-Mail: mrukhaia@yahoo.com**
**Web:** `http://www.logic.at/staff/mrukhaia/`

## Personal information

**Date of Birth** : 15.10.1986
**Sex** : *Male*
**Nationality** : *Georgian*
**Marital Status** : *Engaged*

## Education

**Doctor of Science** *2010 – 2012*
Institute of Computer Languages, Faculty of Informatics, Vienna University of Technology.

**Master of Science (EMCL double degree)** *2008 – 2009*
Institute of Computer Languages, Faculty of Informatics, Vienna University of Technology.

**Master of Science (EMCL double degree)** *2007 – 2008*
Department of Information Technology, Faculty of Science and Technology, New University of Lisbon.

**Bachelor of Mathematics** *2003 – 2007*
Department of Mechanics and Mathematics, Faculty of Exact and Natural Sciences, Tbilisi State University.

**1992 − 2003** Secondary school of Tbilisi, #171.

## Languages

*Georgian* — Native.
Good in *English* and *Russian*. Very basic in *German*.

## Employment History

**Senior Researcher** *February 2013 – to present*

Institute of Applied Mathematics, Tbilisi State University.

**Responsibilities & Activities:** Doing research in Mathematical logic and Proof Theory. Also some organizational staff, like organizing internal seminars, workshops and the like.

**Project Assistant** *March 2010 – December 2012*

Institute of Computer Languages, Vienna University of Technology.

**Responsibilities & Activities:** Member of the research project "About Schemata And Proofs"[1]. Committer of the "General Architecture for Proof Theory" framework[2], leading the Graphical User Interface design and implementation, and incorporating feedback.

**Researcher** *November 2009 – December 2009*

Institute of Applied Mathematics, Tbilisi State University.

**Responsibilities & Activities:** Doing research in Mathematical logic and combining work of help desk, like troubleshooting computer hardware and software problems.

**IT Specialist** *July 2006 – October 2007*

JSC "TaoBank" (former "First Commercial Bank"), Tbilisi, Georgia.

**Responsibilities & Activities:** Troubleshooting and servicing computer/server/storage hardware and software, HP Proliant Server network infrastructure, resolving hardware and software problems on HP Thin Clients and Servers. Bank operation system software (ALTA) troubleshooting, resolving problems and creating database schemas for new users.

**IT Manager of Software Department** *February 2005 – June 2006*

JSC "First Commercial Bank", Tbilisi, Georgia.

**Responsibilities & Activities:** Troubleshooting and servicing computer/server/storage hardware and software, HP Proliant Server network infrastructure, resolving hardware and software problems on HP Thin Clients and Servers. Bank operation system software (ALTA) troubleshooting, resolving problems and creating database schemas for new users.

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[1]ASAP homepage: `http://www.logic.at/asap`
[2]GAPT homepage: `http://code.google.com/p/gapt/`

## Workshops, Conferences, Talks

### 2012

Talk *"ProofTool: GUI for the GAPT Framework"* on the 10th International Workshop On User Interfaces for Theorem Provers, Bremen, Germany.

Talk *"CERES for Propositional Proof Schemata"* (refined version) on the ASAP Project Meeting, Grenoble, France.

Participant of the Concepts and Meaning Workshop in honour of Alexander Leitsch's 60th Birthday, Vienna, Austria.

### 2011

Talk *"CERES for Propositional Proof Schemata"* on the Workshop on Structural and Computational Proof Theory, Innsbruck, Austria.

Talk *"CERES and Fast Cut-Elimination"* on the Ninth International Tbilisi Symposium on Language, Logic and Computation, Kutaisi, Georgia.

Participant of the Seventh International Tbilisi Summer School in Logic and Language, Tbilisi, Georgia. (Informal member of the organizing committee.)

Participant of the New Trends in Logic Conference, Vienna, Austria.

### 2010

Participant of the Sixth International Tbilisi Summer School in Logic and Language, Svaneti, Georgia. (Informal member of the organizing committee.)

### 2009

Participant of the Fifth International Tbilisi Summer School in Logic and Language, Tbilisi, Georgia. (Informal member of the organizing committee.)

Talk *"Second Order Cut-Elimination"* on the Eighth International Tbilisi Symposium on Language, Logic and Computation, Bakuriani, Georgia.

Member of the Student Session Programme Committee on the EASSS09 (European Agent Systems Summer School), Educatorio della Provvidenza, Turin, Italy.

Participant of the RISC/SCIEnce Summer School in Symbolic Computation, Johannes Kepler University of Linz, Hagenberg, Austria. (Honored by the traveling grant.)

Participant of the Joint Moscow–Vienna Workshop on Logic and Computation 2009, Vienna University of Technology, Vienna, Austria.

Participant of the Erasmus Mundus Conference — Climate Change and Higher Education, Central European University, Budapest, Hungary.

Participant of the EMCL (European Master in Computational Logic) Student Workshop 2009, Technical University of Madrid, Madrid, Spain.

## 2008

Participant of the Fourth International Tbilisi Summer School in Logic and Language, Tbilisi, Georgia. (Informal member of the organizing committee.)

Participant of the EASSS08 (European Agent Systems Summer School), New University of Lisbon, Lisbon, Portugal. (Informal member of the organizing committee.)

Participant of the Non-classical Logics: From Foundations to Applications Workshop, Mathematics Research Center Ennio de Giorgi, Scuola Normale Superiore, Pisa, Italy. (Honored by the traveling grant.)

Participant of the EMCL (European Master in Computational Logic) Student Workshop 2008, New University of Lisbon, Lisbon, Portugal.

## 2007

Participant of the Third Vienna Tbilisi Summer School in Logic and Language, Tbilisi, Georgia.

## 2006

Participant of the Second Vienna Tbilisi Summer School in Logic and Language, Tbilisi, Georgia.

Talk *"Modeling on Mathematical Logic Language"* on the Post and Undergraduate Students 66 Conference, Tbilisi State University, Tbilisi, Georgia. (Honored with the third grade diploma)

## 2005

Participant of the First Vienna Tbilisi Summer School in Logic and Language, Tbilisi, Georgia.

**2004**

Participant of the International Tbilisi Summer School in Language, Logic and Computation, Tbilisi, Georgia.

# Publications

[1] **2013** (Joint work with Stefan Hetzl, Tomer Libal and Martin Riener): Understanding Resolution Proofs through Herbrand's Theorem. Submitted to the 24th International Conference on Automated Deduction. **[2013]**

[2] **2012a** (Joint work with Cvetan Dunchev, Alexander Leitsch and Daniel Weller): CERES for First-Order Schemata. Submitted to Journal of Logic and Computation. **[2012]**

[3] **2012b** (Joint work with Cvetan Dunchev, Alexander Leitsch and Daniel Weller): CERES for Propositional Proof Schemata. Technical report, Vienna University of Technology.

[4] **2012c:** *CERES in Proof Schemata.* PhD thesis, Vienna University of Technology.

[5] **2012d** (Joint work with Cvetan Dunchev, Alexander Leitsch, Tomer Libal, Martin Riener, Daniel Weller and Bruno Woltzenlogel-Paleo): ProofTool: GUI for the GAPT Framework. In: *Handouts of 10th International Workshop on User Interfaces for Theorem Provers (UITP 2012)*, pp. 17–27.

[6] **2012e** (Joint work with Cvetan Dunchev, Alexander Leitsch, Tomer Libal, Martin Riener, Daniel Weller and Bruno Woltzenlogel-Paleo): System Feature Description: Importing Refutations into the GAPT Framework. In: Pichardie, David and Weber, Tjark (eds.): *Second International Workshop on Proof Exchange for Theorem Proving (PxTP 2012)*, vol. 878 (of CEUR Workshop Proceedings), pp. 51–57.

[7] **2011:** *CERES and Fast Cut-Elimination. A monograph.* VDM-Verlag, Saarbrücken. **[2011]**

[8] **2009a:** CERES and Fast Cut-Elimination. Master's thesis, Vienna University of Technology. **[2009]**

[9] **2009b:** Implementation of Second Order Cut-Elimination. Technical report, Vienna University of Technology.

[10] **2009c:** Integration of Ontologies with Rule Systems. In: Jangveladze, Temur and Kiguradze, Zurab (eds.): *Reports of Enlarged Sessions of the Seminar of I. Vekua Institute of Applied Mathematics*, vol. 23. pp. 116–122.

## Hobbies

Sports like Handball and Basketball. Also traveling and photography.

## References

**Univ.Prof. Dr.Phil. Alexander Leitsch** — Institute of Computer Languages, Vienna University of Technology.
E-mail.: leitsch@logic.at

**Dr. Nicolas Peltier** — Laboratory of Informatics of Grenoble.
E-mail.: nicolas.peltier@imag.fr

**Priv.-Doz. Dr. Temur Kutsia** — Research Institute for Symbolic Computation, Johannes Kepler University Linz.
E-mail.: kutsia@risc.jku.at

**Dr. Michel Parigot** — Laboratory PPS, University Paris Diderot.
E-mail.: parigot@pps.jussieu.fr